

P6.010

Recent research trends of electrical, magnetic, optical and acoustic stimulations at acupoints; a literature review



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Purpose: In parallel with the growing popularity of the clinical practice of acupuncture, research on modern acupuncture-like stimulation devices (ASDs) has been increasing in recent decades. To summarize the research on the four most popular ASDs, which are based on electrical, magnetic, laser and ultrasonic stimulations, with a focus on their effectiveness in human beings.

Methods: We analyzed papers from several medical electronic databases, including Medline, PubMed, the Cochrane Library, and Web of Science. Studies with all types of design and clinical indications that were performed with human subjects and written in English were included. We excluded papers that contained clinical experiments on animals and manual acupuncture techniques, and we also excluded review papers.

Results: A total of 728 studies were found, and 195 studies met our inclusion criteria. The 195 studies were included the 4 types of stimulation methods: 133 studies with electric stimulation (ES), 44 studies with laser stimulation (LS), 16 studies with magnetic stimulation (MS), and 2 studies with ultrasonic stimulation (US). These 4 types of stimulation can be further classified into 13 categories according to their effects. Of these studies, 181 reported therapeutic benefits. A total of 114 studies (58%) used random clinical trials (RCTs), and 109 studies (96%) reported therapeutic benefits among the RCTs.

Conclusion: For the first time, we reviewed the therapeutic effects of the four most popular ASDs which are ES, LS, MS and US. We found that the ES technique was the earliest modern application and the most widely studied among ASDs, and was followed by LS, MS and US. The majority of the studies (32%) focused on the effects of analgesia and pain relief, and brain activity (16%) was an emerging research field. We expect noninvasive or minimally invasive ASDs will become more popular in the acupuncture research due to safety, infection, and convenience.

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P6.011

A Linked Data in Korean Medicine



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Purpose: Linked data is a method of publishing and sharing pieces of data, information, and knowledge on the Web using Semantic Web technologies such as URI, RDF, and HTTP. To share Korean medicine knowledge on the Web, first of all, information on Korean medicine is required to be linked with that on other domains. The aim of this study is to construct

a linked data in Korean medicine so that Korean medicine knowledge can be published and shared on the Web.

Methods: Information on medicinal materials in Korean medicine is constructed using ontology. Each medicinal material has scientific names, category names, family names, using parts, meridian entries, natures, flavors, toxicities, effects, treatments, and contraindications. All entities are identified with URIs and linked each other using RDF. In particular, scientific names are linked to taxonomy IDs, provided in NCBI.

Results: An ontology for about 800 medicinal materials is constructed. This ontology is also registered in Datahub, where users can publish and share their datasets. In our ontology, 2,119 scientific names are linked to other datasets with biportal-ncbitaxon namespace. Our linked data can be queried using SPARQL and also downloaded as RDF/XML files in Datahub.

Conclusion: With the recent rising interest in Semantic Web, many people try to construct and publish information as linked data. To share Korean medicine knowledge with other domains on the Web, interlinking between each domain is required. In the future, we plan to link more information on our ontology to other datasets.

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Applications on traditional Chinese prescription and medicine of the "spleen stomach damp-heat syndrome" based on modern literature research



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Purpose: Analyze the status and regular pattern on the usage of traditional Chinese prescription and medicine of the "spleen stomach damp-heat syndrome" in the modern literature.

Methods: Taking "spleen stomach damp-heat syndrome" as subject term or title/keyword, the databases of China National Knowledge Infrastructure(CNKI), Wanfang Data Knowledge Service Platform and VIP Information were systematically retrieved for collecting related literature before 2014, the related data was given descriptive and statistical analysis by using Excel software.

Results: 1. The results about application of traditional Chinese prescription of the "spleen stomach damp-heat syndrome": The classic ancient Chinese medicine prescriptions accounted for 49%, clinical experience prescription of famous old doctor of Traditional Chinese Medicine in the modern, the clinician's self prescription and hospital preparation accounted for 51%; The most commonly traditional Chinese prescriptions are "Pinellia Heart- Purging Decoction (Banxia Xiexin Tang)", "Three-Nut Decoction (Sanren Tang)", "Coptis and Clearing Gallbladder-Heat Decoction (Huanglian Wendan Tang)" and "Calming the Stomach Powder (Pingwei San)", and so on. 2. The usage of the frequency in the top 14 of traditional Chinese medicine are Huanglian (rhizoma coptidis),